

INITIAL REVIEW ENGINEERING REPORT
PMN: 18-0136

Post-Focus Draft Revision 1 7/13/2018

ENGINEER: Lopez-Ferrer / Avcin \ AH

PV (kg/yr): [REDACTED]

Revision Notes / Assessment Overview: [REDACTED] Updated dermal exposure during Use operation.

SUBMITTER: [REDACTED]

USE: [REDACTED]

[REDACTED]
All analogs are dyes for [REDACTED].

OTHER USES: No other uses were found for the PMN material.

MSDS: Yes

Label: No

Gen Eqpt: Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Use safety eyewear designed to protect against splash of liquids. Personnel should wear antistatic clothing made of natural fibres or of hightemperature-resistant synthetic fibres. Appropriate footwear.

Respirator: If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

Health Effects: Harmful if swallowed. Causes serious eye irritation. Non-irritating to the skin. Toxic to aquatic life with long lasting effects.

TLV/PEL:

None established.

CRSS (04/23/2018):

Chemical Name: [REDACTED]
[REDACTED]
[REDACTED]

S-H2O: 2.067 g/L @

VP: 1.0E-6 torr @

MW: [REDACTED]

Physical State and Misc CRSS Info:

Neat: Solid Mfg: NK - Imported in formulation Proc/Form: Solid, [REDACTED] PMN material in [REDACTED] End Use: Solid, PMN material

[REDACTED] Submitted data: magenta solid; VP = 3.5E-8 torr at 23 °C; WS = 2.067 g/L (OECD 105); log P = 1.739 (OECD 107); density = 1.15 g/cc (OECD 109); surface tension = 52.2 nM.m-1 (OECD 115, ring method); not flammable.
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Consumer Use: No

SAT (concerns) (04/24/2018):

Related Cases and Misc SAT Info:

Ecotox related cases: [REDACTED]
[REDACTED]
[REDACTED]

Migration to groundwater: Moderate to Rapid

PBT rating: P3B1T2

Health: 1-2 Dermal, Inhalation, Oral

Eco: 2 Water (chronic aquatic Coc = 19 ppb)

OCCUPATIONAL EXPOSURE RATING: [REDACTED]

NOTES & KEY ASSUMPTIONS:

Occupational exposure and environmental releases were estimated using the 9/30/2013 version of ChemSTEER tool. Input to ChemSTEER tool includes information from: the PMN submission, physical / chemical properties, relevant past cases, and the 1992 GS on Toner Used in Photocopier. PMN is imported inside sealed toner/ink cartridges and is present as a dye in [REDACTED]. SAT concerns are for dermal, inhalation, oral exposures, and water releases. Based on information provided in submission, releases to water are not expected. Inhalation exposure is expected to be negligible (PMN VP << 0.01 torr and PMN is not a powder). While some dermal exposure may occur, the likelihood of exposure is expected to be low. /// The following same submitter, similar use past cases are referenced for consistency: [REDACTED]

[REDACTED] The new chemical substance in all past cases were component of ink/toner that were imported inside sealed cartridges (consistent with this IRER), with [REDACTED] also [REDACTED]. For end-use, all past cases assessed 100% release [REDACTED] to incin/land from disposal of printed media and empty cartridges (consistent with this IRER). These past cases also assessed 1-hand dermal exposure during cartridge changeout (consistent with this IRER, however, note 1-hand dermal model is not available for solids).

POLLUTION PREVENTION CONSIDERATIONS:

No Pollution Prevention information was provided by the submitter.

EXPOSURE-BASED REVIEW: No

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Processing

Number of Sites/ Location: ■

Days/yr: ■

Basis: Per submission: ■. PMN
is imported at ■ in fully enclosed packages.

Process Description: PMN imported as part of an enclosed printer
cartridge unit ■
■, the ■
■ --> ■
■ for
further distribution to customers. No repackaging or blending will occur
per submission.

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

Because the ■ cartridges are fully enclosed as imported, and are
not further processed/repackaged, no releases are expected. If import
packages are accidentally damaged, they will be disposed via
incineration or landfill per submitter.

OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY

Tot. # of workers exposed via assessed routes: ■

Basis:

Inhalation:

Dermal:

Exposure not expected as PMN is imported in fully enclosed packages.

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Use: Commercial [REDACTED] Printing

Number of Sites/ Location: [REDACTED]

unknown site(s)

Days/yr: [REDACTED]

Basis: Per submission, [REDACTED] of ink/toner containing [REDACTED]. CS calculates [REDACTED]

Process Description: [REDACTED] distributed to commercial end-use sites --> [REDACTED] --> [REDACTED] inside printer during printing --> toner/ink printed and adheres on printed media; once printed, the ink does not transfer from the media/page (submission)

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

IRER Note: The daily releases listed for any source below may coincide with daily releases from the other sources to the same medium.

Incineration or Landfill

Output 2: [REDACTED]

to: Incineration or landfill (submission)

from: Disposal of Printed Paper and Empty Cartridges

basis: User-Defined Loss Rate Model. During printer, [REDACTED]

[REDACTED], per submission. [REDACTED] and disposed as non-hazardous waste. EPA assumes all ink/toner will be eventually disposed either as waste/residual ink in cartridges/[REDACTED] or as part of printed media (paper).

RELEASE TOTAL

OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY

Tot. # of workers exposed via assessed routes: [REDACTED]

Basis: EPA assesses a default minimum of [REDACTED].

Inhalation:

negligible ($VP < 0.001$ torr)

Dermal:

Dermal exposure is very unlikely to the [REDACTED] [REDACTED] are contained inside cartridges and deployed from these cartridges directly into the printer where they are then [REDACTED] onto the substrate. [REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]